

IN THE CLAIMS:

Kindly cancel claim 4 without prejudice or disclaimer. Kindly amend claim 3, 5 and 10 as follows. Please add new claim 12 as follows. A detailed listing of all claims is as follows.

Claim 1 (Canceled)

Claim 2 (Previously Presented): The spark plug as set forth in claim 3, wherein the glaze layer contains:

15 to 60 mol% of SiO_2 ;

22 to 50 mol% of B_2O_3 ;

10 to 30 mol% of ZnO ;

0.5 to 35 mol% in total of at least one of BaO and SrO ;

1 mol% or less of F ;

0.1 to 5 mol% of Al_2O_3 ; and

1.1 to 10 mol% in total of at least one of Na_2O , K_2O and Li_2O , wherein Li is essential, and the content of Li_2O is 1.1 to 6 mol%.

Claim 3 (Currently Amended): A spark plug comprising:

a center electrode;

a metal shell;

an insulator comprising alumina ceramic and disposed between the center electrode and the metal shell,

wherein at least part of the surface of the insulator is covered with a glaze layer, the glaze layer contains 1 mol% or less of PbO, the glaze layer has a Vickers hardness Hv of 100 or more, and the glaze layer contains at least one of phosphate ion, sulfate ion, fluoride ion and chloride ion in a content of 0.5 to 10 mol% in total.

Claim 4 (Canceled)

Claim 5 (Currently Amended): The spark plug as set forth in claim [[4]] 3, wherein the glaze layer contains sulfate ion in a content of 0.5 to 10 mol%.

Claim 6 (Previously Presented): The spark plug as set forth in claim 3, wherein the glaze layer further contains 0.5 to 5 mol% in total of at least one of ZrO₂, TiO₂ and HfO₂.

Claim 7 (Previously Presented): The spark plug as set forth in claim 3, wherein the glaze layer further contains 0.5 to 5 mol% in total of at least one of MoO₃, WO₃, Ni₃O₄, Co₃O₄, Fe₂O₃, and MnO₂.

Claim 8 (Previously Presented): The spark plug as set forth in claim 3, wherein the glaze layer shows an external appearance of 0 to 6 in chroma Cs and 7.5 to 10 in lightness Vs when observed in the state that the glaze is formed on the insulator.

Claim 9 (Previously Presented): The spark plug as set forth in claim 3, wherein the insulator is formed with a projection part in an outer circumferential direction at an axially central position thereof,

taking, as a front side, a side directing toward the front end of the center electrode in the axial direction, a cylindrical face is shaped in the outer circumferential face at the base portion of the insulator main body in the neighborhood of a rear side opposite the projection part, and the outer circumferential face at the base portion is covered with the glaze layer formed with the film thickness ranging 10 to 50 μm .

Claim 10 (Currently Amended): A spark plug comprising:

a center electrode;

a metal shell;

an insulator comprising alumina ceramic and disposed between the center electrode and the metal shell,

wherein at least part of the surface of the insulator is covered with a glaze layer, the glaze layer contains 1 mol% or less of PbO , the glaze layer has a Vickers hardness H_v of 100 or more, and the glaze layer is formed by adding at least one of phosphates, sulfates, ~~fluorides~~ and chlorides.

Claim 11 (Previously Presented): A spark plug comprising:

a center electrode;

a metal shell;

an insulator comprising alumina ceramic and disposed between the center electrode and the metal shell,

wherein at least part of the surface of the insulator is covered with a glaze layer, the glaze layer contains 1 mol% or less of PbO, the glaze layer has a Vickers hardness Hv of 100 or more, and the glaze layer is formed by adding at least one of K₃PO₄ powder, BaSO₄ powder, CaF powder and KCl powder.

Claim 12 (New): A spark plug comprising:

a center electrode;

a metal shell;

an insulator comprising alumina ceramic and disposed between the center electrode and the metal shell,

wherein at least part of the surface of the insulator is covered with a glaze layer, the glaze layer contains 1 mol% or less of PbO, the glaze layer has a Vickers hardness Hv of 100 or more, and the glaze layer contains at least one of phosphate ion, sulfate ion and chloride ion.